

Claims

1. ~~comprising~~

A method for treating a subject having an inflammatory joint disorder
administering to a subject in need of such treatment a therapeutically effective
5 amount of a cadherin-11 inhibitory agent
wherein the cadherin-11 inhibitory agent inhibits binding of cadherin-11 to a cadherin-
11 counter-receptor.

2. ~~The method of claim 1, wherein the inflammatory joint disorder is chronic~~
10 ~~synovitis.~~

3. The method of claim 1, wherein the inflammatory joint disorder is an
autoimmune disease.

4. ~~The method of claim 3, wherein the autoimmune disease is rheumatoid~~
15 ~~arthritis.~~

5. The method of claim 1, wherein the cadherin-11 inhibitory agent is
administered locally to a synovium of the subject.

6. The method of claim 1, wherein the cadherin-11 inhibitory agent binds
selectively to cadherin-11.

7. The method of claim 1, wherein the cadherin-11 inhibitory agent binds
25 selectively to a cadherin-11 counter-receptor.

8. ~~The method of claim 1, wherein the cadherin-11 inhibitory agent is an~~
~~antibody.~~

9. The method of claim 1, wherein the cadherin-11 inhibitory agent is a cadherin-
30 11 polypeptide.

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11. The method of claim 10, wherein the soluble cadherin-11 polypeptide selectively binds to the cadherin-11 counter-receptor.

13. The method of claim 1, wherein the cadherin-11 inhibitory agent is a nucleic acid molecule.

15. The method of claim 13, wherein the nucleic acid molecule is an antisense molecule.

~~17. The method of claim 1, wherein cadherin-11 and the cadherin-11 counter-receptor are expressed by separate cells.~~

19. The method of claim 1, wherein the cadherin-11 counter-receptor is expressed by a cell selected from the group consisting of a type A synoviocyte, a type B synoviocyte, a synovial derived fibroblast, a synovial membrane lining cell, an osteoblast, a cartilage-derived

20. The method of claim 1, wherein the cadherin-11 counter-receptor is a component of an extracellular matrix of a tissue, a cartilage or a bone.

10 22. ~~A method for screening a molecular library to identify a pharmaceutical lead~~
~~compound that modulates cadherin-11 mediated adhesion between a first cell that expresses~~
~~cadherin-11 and a second cell that expresses a cadherin-11 counter-receptor, the method~~
~~comprising~~

performing a second adhesion assay between the first cell and the second cell in the presence of at least one molecular library member to obtain a second adhesion assay result, and

~~23. The method of claim 22, wherein the cadherin-11 counter-receptor is selected from the group consisting of a cadherin, an integrin, a carbohydrate and an immunoglobulin family member.~~

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25. The method of claim 22, wherein the second cell is selected from the group consisting of a type A synoviocyte, a type B synoviocyte, a synovial derived fibroblast, a

synovial membrane lining cell, an osteoblast, a T lymphocyte, a B lymphocyte, a plasma cell, a dendritic cell, a macrophage, a mast cell and a natural killer cell.

26. The method of claim 22, wherein the first cell is derived from invasive pannus
5 and the second cell is derived from cartilage.

27. The method of claim 22, wherein the molecular library is recombinantly
produced.

10 28. The method of claim 22, wherein the molecular library is chemically
synthesized.

29. The method of claim 22, wherein the molecular library is a peptide library.

15 30. A method for screening a molecular library to identify a pharmaceutical lead
compound that modulates cadherin-11 mediated adhesion, the method comprising
performing a first adhesion assay between cadherin-11 and a cadherin-11
counter-receptor to obtain a first adhesion assay result,
performing a second adhesion assay between cadherin-11 and the cadherin-11
20 counter-receptor in the presence of at least one molecular library member to obtain a second
adhesion result, and
comparing the first and the second adhesion assay results to determine whether
the at least one molecular library member modulates cadherin-11 mediated adhesion.

25 31. The method of claim 30, wherein cadherin-11 is isolated.

32. The method of claim 30, wherein cadherin-11 is presented by a cell.

30 33. The method of claim 32, wherein the cell is selected from the group consisting
of a type A synoviocyte, a type B synoviocyte, a synovial derived fibroblast, a synovial
membrane lining cell, an osteoblast, a cartilage-derived cell and an invasive pannus-derived
cell.

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35. The method of claim 30, wherein the cadherin-11 counter-receptor is a cadherin-11 fusion polypeptide.

10 ~~37.~~ The method of claim 30, wherein the cadherin-11 counter-receptor is presented
by a cell.

39. The method of claim 30, wherein cadherin-11 is soluble.

41. The method of claim 30, wherein the molecular library is recombinantly produced.

43. The method of claim 30, wherein the molecular library is a peptide library.

30  44 A method for treating a subject having an inflammatory joint disorder

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comparing the first value and the second value to determine whether the at least one molecular library member modulates factor secretion in a cadherin-11 expressing cell.

49. The method of claim 48, wherein the factor secretion is selected from the group consisting of stromelysin secretion, collagen secretion, collagenase secretion and IL-6 secretion.

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